WHAT IS CLAIMED IS:

SUB A'

1. A cable telephony network interface unit (NIU), said NIU comprising:

a radio frequency (RF) cable input for receiving RF telephony signals, wherein said telephony signals comprise a time division multiplexed (TDM) RF signal having a frame rate;

an RF tuner for processing said TDM RF signal, wherein said tuner has an acquisition time of less than half of said frame rate, whereby said tuner is pulsed on for signal acquisitions, and pulsed off between signal acquisitions; and

a voice telephony device compatible output for providing an output from said tuner to a telephony device.

2. The NIU of claim 1, wherein said acquisition time is less than one-fourth of said frame rate.

3. The NIU of claim 1, wherein said acquisition time is less than about 5 milliseconds.

4. The NIU of claim 1, wherein said acquisition time is less than about 1 millisecond.

5. The NIU of claim 1, wherein said tuner comprises fractional-N generated local oscillator reference frequency signals.

6. The NIU of claim 1, wherein said tuner comprises multiple phase locked loops (PLLs) generating said tuner's local oscillator reference frequencies.

7. The NIU of claim 6, wherein said PLLs comprise a wide loop bandwidth.

8. The NIU of claim 7, wherein said loop bandwidth is greater than said reference frequencies.

9. The NIU of claim 7, wherein said loop bandwidth is greater than about 1 KHz.

10. The NIU of claim 1, wherein said TDM is time division multiple access (TDMA).

11. The NIU of claim 1, wherein said TDM RF signal is further multiplexed with code division multiple access (CDMA).

12. The NIU of claim 1, wherein most of said tuner's components are located on a single integrated circuit.

13. The NIU of claim 1, wherein said RF telephony signals further comprise a continuous wave (CW) signal, and said tuner is capable of processing said CW signal.

14. The NIU of claim 13, wherein said NIU receives electrical power via said cable input when said tuner is processing said TDM RF signal, and receives electrical power from a different source when processing said CW signal.

15. The NIU of claim 1, further comprising a demodulator interposed between said voice telephony device compatible output and said tuner.

16. The NIU of claim 15, wherein said demodulator uses a first modulation type when said NIU receives electrical power from an external source, and switches to a second modulation type when said NIU receives power via said cable input.

17. A method for processing cable telephony signals, said method comprising:

receiving a time division multiplexed (TDM) RF cable signal from a cable input, said TDM RF signal comprising frames having time slots;

pulsing on a fast acquisition time tuner for an allocated time slot in each of said frames, said tuner for processing said TDM RF signal; and

pulsing off said tuner for substantially the remainder of time in each of said frames, said frames having a frame rate.

18. The method of claim 17, wherein said TDM RF signal is received during a loss of power from an external source.

19. The method of claim 18, further comprising receiving power from said cable input during said loss of power from said external source.

20. The method of claim 18, further comprising sending an alert signal to a cable plant after said loss of power from said external source, to inform said cable plant of said loss of power.

21. The method of claim 18, further comprising:

receiving and processing a continuous wave (CW) RF cable signal before said loss of power; and

switching to said receiving of said TDM RF cable signal after said loss of power.

22. The method of claim 17, wherein said TDM is time division multiple access (TDMA).

23. The method of claim 17, wherein said TDM RF signal is further multiplexed with code division multiple access (CDMA).

24. The method of claim 17, wherein said acquisition time is less than one-fourth of said frame rate.

25. The method of claim 17, wherein said acquisition time is less than about 5 milliseconds.

26. The method of claim 17, wherein said acquisition time is less than about 1 millisecond.

27. The method of claim 17, wherein said tuner comprises fractional-N generated local oscillator reference frequency signals.

28. The method of claim 17 further comprising generating said tuner's local oscillator reference frequencies with multiple phase locked loops (PLLs).

29. The method of claim 28, wherein said PLLs comprise a wide loop bandwidth.

30. The method of claim 29, wherein said loop bandwidth is greater than said reference frequencies.

31. The method of claim 29, wherein said loop bandwidth is greater than about 1 KHz.

32. The method of claim 17, further comprising demodulating an output signal from said tuner.

33. The method of claim 32, further comprising using a first modulation type when electrical power is received from an external source, and switching to a second modulation type when electrical power is received via said cable input.

34. A cable telephony tuner, said tuner comprising:

means for receiving a time division multiplexed (TDM) RF cable signal from a cable input, said TDM RF signal comprising frames having time slots;

means for pulsing on a fast acquisition time tuner for an allocated time slot in each of said frames, said tuner for processing said TDM RF signal; and

means for pulsing off said tuner for substantially the remainder of time in each of said frames, said frames having a frame rate.

35. The tuner of claim 34, wherein said TDM RF signal is received during a loss of power from an external source.

36. The tuner of claim 35, further comprising means for receiving power from said cable input during said loss of power from said external source.

37. The tuner of claim 35, further comprising means for sending an alert signal to a cable plant after said loss of power from said external source, to inform said cable plant of said loss of power.

38. The tuner of claim 35, further comprising:

means for receiving and processing a continuous wave (CW) RF cable signal before said loss of power; and

means for switching to said receiving of said TDM RF cable signal after said loss of power.

39. The tuner of claim 34, wherein said TDM is time division multiple access (TDMA).

40. The tuner of claim 34, wherein said acquisition time is less than one-fourth of said frame rate.

41. The tuner of claim 34, wherein said tuner comprises fractional-N generated local oscillator reference frequency signals.

42. The tuner of claim 34 further comprising generating said tuner's local oscillator reference frequencies with multiple phase locked loops (PLLs).

43. The tuner of claim 42, wherein said PLLs comprise a wide loop bandwidth.

44. The tuner of claim 43, wherein said loop bandwidth is greater than said reference frequencies.

45. The method of claim 43, wherein said loop bandwidth is greater than about 1 KHz.

46. A method for providing lifeline support in cable telephony, said method comprising:

receiving electrical power from an external power source;

receiving a continuous wave (CW) RF cable signal from a cable input;

processing said CW RF signal with an RF tuner;

losing power from said external power source;

switching to receive said electrical power from said cable input;

receiving a TDM RF telephony signal in place of said CW RF signal, said TDM RF signal comprising frames have time slots; and

pulsing said tuner on during an allocated time slot in each of said frames and off for substantially the remainder of each of said frames, whereby power consumption by said tuner is significantly reduced when said external power is lost.

47. The method of claim 46, further comprising sending an alert signal to a cable plant after losing said external power to inform said cable plant of said external power loss.

48. The method of claim 46, wherein said CW RF signal comprises video, data and voice information.